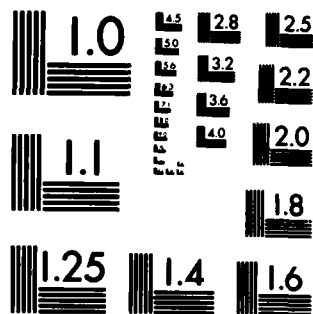


AD-A127 350 193188 MLRS MISSILE NUMBERS BN-148 BN-134 BN-169 BN-173 1/1
BN-142 BN-176 ROU. (U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER 04 MAR 83
UNCLASSIFIED ERADCOM/ASL-DR-1293 F/G 4/2 NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD A127350

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
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4. TITLE (and Subtitle) 19318B MLRS Missile Number BN-148,BN-134,BN-169,,BN-173,BN-142,BN-176 Round Number V-437/OT-43 Thru V-442/OT-48		5. TYPE OF REPORT & PERIOD COVERED
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<input checked="" type="checkbox"/> 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19318B MLRS, Missile Number BN-148, BN-134, BN-169, BN-173, BN-142, and BN-176, Round Number V-437/OT-43 Thru V-442/OT-48.		

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INTRODUCTION

1931GB MLRS, Missile Numbers BN-148, BN-169, BN-173, BN-142 and BN-176, Round Numbers V-437/OT-43 Thru V-442/OT-48, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1537:01, 1537:05, 1537:10, 1537:14, 1537:19 and 1537:23 MST, 04 Mar 83. The scheduled launch times were 1500 MST with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m³), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE

LC-33 1350 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

WSD 1231 MST

WSD 1341 MST

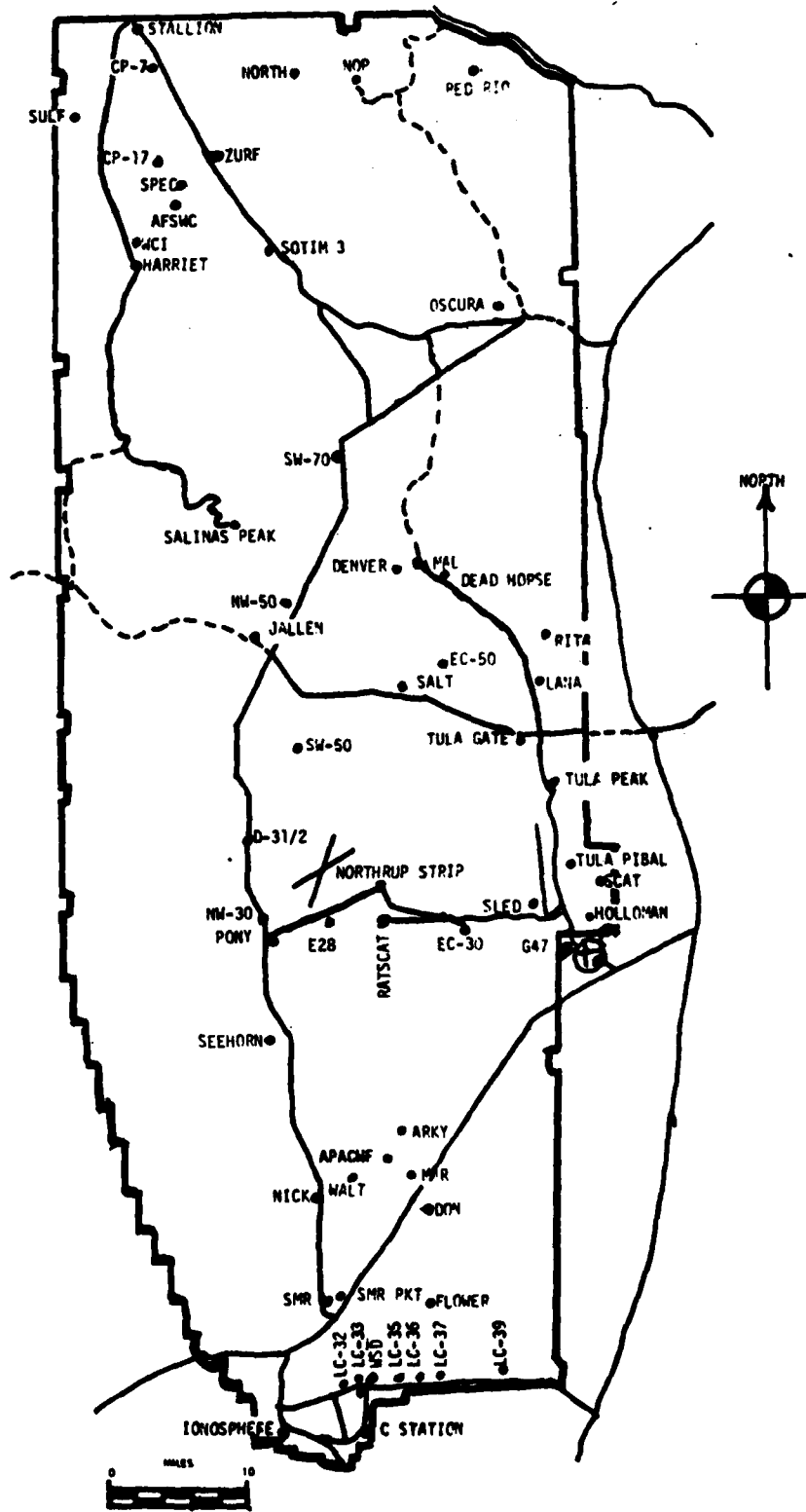
LC-37 1413 MST

WSD 1534 MST

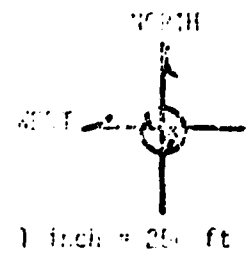
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Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	



WSMR METEOROLOGICAL SITES



LC-35
Launch Area



MLT
Tower

T-9 Radar

L-579A
L-351A

anemometer Pole #3
anemometer Pole #2
L-519A
L-350A

Line of Fire

Y186,500

Y186,000

Y185,500

X495,000

X495,500

X496,000

Y185,000

L-500

PROJECT SURFACE OBSERVATION

TABLE 1									
STATION LC-33 E & A									
DATE 4 Mar 83									
X= 484,982.64 Y= 185,957.73 H= 39995.00									
TIME M S T	PRESSURE mbs	TEMPERATURE OF OC	DEW POINT OF OC	RELATIVE HUMIDITY %	DENSITY gm/m ³	DIRECTION degs Tn	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
1537	8623	13.2	0.9	43	1048	270	24		50

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS			
	1st LAYER		2nd LAYER		3rd LAYER					
	AMT	TYPE	AMT	TYPE	AMT	TYPE				
	5	SC	2,500	1	AS	12,000	2	CS	20,000	RWU N-E-S

PSYCHROMETRIC COMPUTATION

TIME:	MDT	1537	
DRY BULB TEMP.		13.2	
WET BULB TEMP.		7.0	
WET BULB DEPR.		6.2	
DEW POINT		0.9	
RELATIVE HUMID.		43	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,052.00 H4018.74 22.7 ft. AGL			POLE #2 X485,874.29 Y185,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.00 Y185,070.00 H4033.57 23.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	255	18	T-30	240	13	T-30	252	25
T-20	255	28	T-20	240	24	T-20	261	21
T-10	255	20	T-10	250	17	T-10	263	24
T0.0	255	26	T0.0	257	13	T0.0	264	31
T+10	255	22	T+10	260	16	T+10	264	30

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	277	23	T-30	273	22
T-20	293	17	T-20	265	27
T-10	287	19	T-10	256	22
T0.0	274	24	T0.0	240	35
T+10	268	29	T+10	268	31

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	275	23	T-30	270	34
T-20	266	26	T-20	252	25
T-10	273	22	T-10	277	30
T0.0	255	32	T0.0	258	34
T+10	275	31	T+10	276	30

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 4 Mar 83

SITE: LC-33
 TIME: 1537
 WSTM COORDINATES:
 X= 404,837.34
 Y= 184,124.44
 H= 3,975.57

SITE:
 TIME
 WSTM COORDINATES:
 X=
 Y=
 H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	274	24
150	267	23
210	264	32
270	262	33
330	263	32
390	264	31
500	266	30
650	265	24
800	264	23
950	265	24
1150	269	25
1350	274	36
1550	MISG	
1750		
2000		

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150		
210		
270		
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

TABLE 5

AIMING AND T-TIME COMPUTER NET MESSAGES

4 March 1983

WSD 1231 MST	WSD 1341 MST	LC-37 1413 MST	WSD 1537 MST
METCM1324064	METCM1324064	METCM1324063	METCM1324064
041950122365	042070122804	042120124362	042260122363
00409012 23660865	00427018 28650864	00267003 28720862	
01432030 23410854	01454022 28390853	01327007 28410352	00471020 28820863
02450020 23090829	02463032 28070828	02410017 28180826	01473038 28570853
03466021 27720780	03472031 27710788	03435030 27820787	02469023 28260827
04463023 27250742	04482032 27280741	04467027 27340740	03471023 27370788
05493022 26810697	05433042 26920696	05463031 26870695	04484035 27390741
06499034 26400653	06436033 26470653	06497032 26440652	05511033 27070696
07493030 26050612	07494036 26090612	07503044 26060611	06522027 26630653
08500039 25710573	08491041 25740573	08502046 25780572	07523029 26180612
09516031 25350537	09491042 25370536	09495042 25410535	08512036 25750573
			09491042 25330536

STATION ALTITUDE 3089.00 FEET MSL
 4 MARKS 1231 HPG. MSL
 ASSESSMENT NO. 114

SIGNIFICANT LEVEL DATA
 ON 30020110
 WHITE SANDS
 TABLE 6

OF OUR THE COORDINATES
 32.400000 LAT DEG
 106.370000 LONG DEG

PRECIPITATION	GEOMETRIC ALTITUDE	AIR TEMPERATURE	WET. MIN.
WILLIAMS, MSL FEET	ALTITUDE	DEGREES CENTIGRADE	PERCENT
864.8	3089.0	12.8	2.6
850.0	4462.1	9.2	-1.2
794.3	6289.9	3.8	-2.4
736.4	8273.1	-1.9	-2.3
700.0	9608.5	-5.4	-5.7
672.7	10631.3	-7.7	-8.0
654.0	11321.0	-8.2	-8.5
637.1	12017.1	-11.1	-12.5
619.1	12739.2	-12.3	-14.4
559.2	15271.2	-17.5	-23.5
550.0	15638.9	-18.3	-23.2
526.4	16750.7	-20.7	-24.9
500.0	17994.3	-23.8	-39.9

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 33 1231 HRS. PST
 ASCENSION NO. 110

WIND & AIR DATA
 ON 3002011A
 WHITE SANDS
 TABLE 7

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 33 1231 HRS. PST
 ASCENSION NO. 110

GEODETIC COORDINATES
 32-40.045 LAT. NFG
 106-57.033 LONG. WFG

GEODETIC ALTITUDE FSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KILOMETERS PER SECOND	WIND DATA DIRECTION DEGREES (TRUE)	WIND SPEED KNOTS	INDEX OF REFRACTION
3489.0	864.8	12.8	50.0	1050.2	354.0	210.0	12.0	1.000268
4000.0	864.5	12.7	50.0	1050.1	354.7	210.3	12.0	1.000268
4500.0	848.8	9.1	48.3	1045.1	355.3	224.0	12.5	1.000259
5000.0	833.2	7.6	52.7	1031.3	353.6	236.2	13.6	1.000246
5500.0	817.9	6.1	57.1	1017.7	351.0	250.1	15.2	1.000233
6000.0	802.9	4.7	61.5	1004.3	350.1	253.9	17.2	1.000240
6500.0	788.0	3.2	67.5	990.9	348.4	260.1	19.4	1.000247
7000.0	773.3	1.8	75.8	977.3	346.8	261.9	20.7	1.000244
7500.0	758.8	.3	84.1	964.0	345.1	262.9	21.8	1.000241
8000.0	744.6	-1.1	92.5	950.9	343.4	263.8	22.9	1.000238
8500.0	730.5	-2.5	97.2	937.8	341.7	267.1	23.7	1.000235
9000.0	716.6	-3.8	97.5	924.6	340.1	270.6	24.7	1.000229
9500.0	702.9	-5.1	97.9	911.6	338.5	273.8	25.7	1.000225
10000.0	689.4	-6.3	98.0	898.1	337.1	277.3	26.6	1.000220
10500.0	676.1	-7.4	98.0	884.7	335.7	280.6	27.6	1.000216
11000.0	663.1	-8.0	98.0	869.4	334.0	282.5	29.0	1.000211
11500.0	650.2	-8.9	95.7	855.8	333.8	280.5	31.7	1.000207
12000.0	637.5	-11.0	89.2	846.1	331.2	279.0	33.9	1.000201
12500.0	625.9	-11.9	69.6	832.6	330.0	278.2	34.7	1.000195
13000.0	612.6	-12.8	59.9	819.2	328.8	278.5	35.8	1.000190
13500.0	600.5	-13.9	59.7	806.1	327.6	279.8	37.1	1.000187
14000.0	588.5	-14.9	59.5	793.3	326.3	280.4	39.3	1.000183
14500.0	576.8	-15.9	59.3	780.6	325.0	281.4	39.4	1.000180
15000.0	565.3	-16.9	59.1	768.2	323.8	283.3	35.8	1.000177
15500.0	554.0	-18.0	62.7	755.9	322.5	286.3	31.4	1.000174
16000.0	542.8	-19.1	57.9	743.9	321.1	288.4	29.4	1.000170
16500.0	531.8	-20.2	48.0	732.0	319.8	286.9	33.0	1.000167
17000.0	521.0	-21.3	38.6	720.5	318.3			1.000163
17500.0	510.3	-22.6	29.7	709.3	316.8			1.000160

STATION ALTITUDE 8,095.0 FEET MSL
4 MAR 63 1231 HRS MST
ASCENSION NO. 110

CALCULATORY LOGS
0030020110
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.57033 LONG DEG

TABLE 3

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUMID. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT DEGREES CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4459.	9.2	-1.2	40.	223.0	12.4
800.0	6094.	4.4	-2.2	62.	255.2	17.6
750.0	7804.	-0.6	-2.1	89.	263.4	22.4
700.0	9509.	-5.4	-5.7	90.	274.5	25.9
650.0	11407.	-9.0	-9.6	90.	280.5	31.7
600.0	13509.	-13.9	-20.0	60.	274.4	37.2
550.0	15660.	-18.4	-23.4	64.	287.5	29.9
500.0	17070.	-23.8	-30.9	21.		

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 43 1341 HRS MST
 ASCENSION NO. 119

SIGNIFICANT LEVEL DATA
 0630020114
 WHITE SANDS

TABLE 9

PRESSURE MILLIHARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REF. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
863.5	3789.0	12.8	1.4	47.0
850.0	4420.6	8.9	-1.2	49.0
826.2	5190.0	6.7	-1.4	56.0
777.7	6809.9	2.3	-3.2	67.0
756.6	7538.0	.4	-3.5	75.0
729.7	8488.7	-2.1	-4.1	86.0
702.0	9571.3	-3.8	-9.0	67.0
654.9	11284.7	-8.7	-12.3	75.0
616.9	12794.3	-12.2	-12.6	97.0
587.9	14003.7	-14.7	-15.1	97.0
500.0	17970.1	-23.4	-23.7	97.0

STATION ALTITUDE 3989.00 FEET MSL
 4 MAR. 43 1341 HRS MST
 ASCENSION NO. 119

UPPER AIR DATA
 0630020114
 WHITE SANDS

WFOOTIC COORDINATES
 32.40043 LAT NFG
 106.37033 LON NFG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	WFL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	863.5	12.8	47.0	1048.8	654.8	240.0	18.1	1.000266
4000.0	863.2	12.7	47.1	1048.7	654.7	240.1	18.1	1.000266
4500.0	847.5	8.7	49.7	1045.0	654.8	246.3	19.6	1.000259
5000.0	832.0	7.2	54.3	1031.1	653.2	251.5	21.4	1.000254
5500.0	818.7	5.9	58.1	1017.2	651.5	255.9	23.3	1.000253
6000.0	801.6	4.5	61.5	1003.3	649.9	259.7	25.3	1.000249
6500.0	788.8	3.1	64.9	989.6	648.3	262.8	27.4	1.000245
7000.0	772.1	1.8	69.1	976.0	646.8	265.5	29.5	1.000242
7500.0	757.7	.5	74.6	962.3	645.2	267.9	31.8	1.000238
8000.0	743.4	-.8	80.3	948.7	643.7	269.3	32.5	1.000235
8500.0	729.4	-2.1	85.8	935.3	642.1	270.5	32.7	1.000232
9000.0	715.5	-2.9	77.0	920.5	641.1	271.7	32.9	1.000229
9500.0	701.9	-3.7	68.3	905.9	640.1	272.8	33.0	1.000218
10000.0	688.4	-5.0	69.0	893.0	638.4	273.4	33.7	1.000214
10500.0	675.2	-6.5	71.3	880.6	636.7	273.9	34.5	1.000211
11000.0	662.2	-7.9	73.7	868.4	635.0	274.3	35.3	1.000207
11500.0	649.4	-9.2	78.1	855.8	633.4	274.7	36.1	1.000204
12000.0	636.7	-10.4	85.4	842.8	632.0	275.1	36.8	1.000201
12500.0	624.2	-11.5	92.7	829.9	630.6	275.5	37.4	1.000198
13000.0	611.9	-12.6	97.0	817.1	629.3	275.9	37.9	1.000195
13500.0	599.8	-13.7	97.0	804.2	628.0	276.3	38.5	1.000191
14000.0	588.0	-14.7	97.0	791.6	626.7	276.6	39.1	1.000187
14500.0	576.1	-15.8	97.0	778.9	625.3	276.6	39.7	1.000183
15000.0	564.5	-16.9	97.0	766.5	624.0	276.5	40.4	1.000180
15500.0	553.1	-18.0	97.0	754.3	622.6	276.5	41.0	1.000176
16000.0	541.9	-19.1	97.0	742.3	621.3			1.000173
16500.0	530.9	-20.2	97.0	730.5	619.9			1.000170
17000.0	520.2	-21.3	97.0	718.9	618.5			1.000167
17500.0	509.7	-22.4	97.0	707.5	617.2			1.000164

STATION ALTITUDE 3489.00 FFFT MSL
 4 MAR. 43
 ASCENSION NO. 119

MANDALAY LEVFLS
 063082n114
 WHITE SANDS

GEODETIC COORDINATES
 32°40'43" LAT NFG
 106°37'03" LONG NFG

TABLE 11

PRESSURE GEOPOTENTIAL		TEMPERATURE		WFL.HIM.		WIND DATA	
MILLIBARS	FEET	ATP	DEWPOINT	PERCENT		DIRECTION	SPEED
		DEGREES	CENTIGRADE			(DEGREES) (TN)	KNOTS
850.0	4418.	8.9	-1.2	49.		245.4	19.4
800.0	6051.	4.4	-2.3	62.		260.0	25.5
750.0	7762.	-0.2	-3.6	74.		268.8	32.5
700.0	9562.	-3.8	-9.0	67.		273.0	33.1
650.0	11464.	-9.1	-12.3	78.		274.6	36.1
600.0	13480.	-13.6	-14.0	97.		276.3	38.5
550.0	15633.	-18.3	-18.6	97.			
500.0	17946.	-23.4	-23.7	97.			

STATION ALTITUDE 4051.37 FEET MSL
 4 MAR. 63 1413 HRS MST
 ASCENSION NO. 32

SIGNIFICANT LEVEL DATA
 06301A0032
 LC-37
 TABLE 12

GEODETIC COORDINATES
 32.40175 LAT NFG
 106.51232 LONG NFG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
862.0	13.1	1.5	45.0
855.9	10.2	-1.8	43.0
850.0	9.8	-1.9	44.0
830.4	8.3	-1.8	49.0
763.2	2.1	-4.2	63.0
716.6	-2.9	-4.5	89.0
700.0	-4.4	-5.9	89.0
662.4	-8.7	-9.0	98.0
653.2	-8.4	-8.5	99.0
636.0	-10.9	-11.7	94.0
593.0	-14.5	-14.6	99.0
588.6	-14.5	-14.7	98.0
543.0	-18.1	-18.7	95.0
538.8	-19.4	-20.4	92.0
500.0	-24.0	-26.3	81.0

GEODETIC COORDINATES
32-40175 LAT DFG
106-31232 LON DFG

UPPER AIR DATA
06301H0032
LC-37

TABLE 13

STATION ALTITUDE 4051.37 FEET MSL
4 MAR. 43 1413 HRS MST
ASCENSION NO. 32

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.4	862.0	13.1	45.0	1045.9	660.1	150.0	8.0	1.000244
4500.0	848.0	9.6	44.5	1042.1	655.9	177.0	6.9	1.000247
5000.0	832.5	8.5	48.4	1027.4	654.6	208.0	7.8	1.000255
5500.0	817.2	7.1	51.7	1013.3	653.0	228.1	10.3	1.000251
6000.0	802.1	5.8	54.7	999.5	651.4	239.5	13.6	1.000247
6500.0	787.3	4.4	57.8	986.0	649.8	246.3	17.2	1.000243
7000.0	772.8	3.0	60.9	972.6	648.1	250.7	21.0	1.000240
7500.0	758.4	1.6	65.6	959.5	646.5	253.8	24.8	1.000236
8000.0	744.1	.1	73.4	946.6	644.7	256.0	28.7	1.000234
8500.0	730.1	-1.4	81.3	933.9	642.9	258.2	29.2	1.000231
9000.0	716.4	-2.9	89.0	921.4	641.2	260.5	28.4	1.000228
9500.0	702.7	-4.2	89.0	908.1	639.6	262.9	27.7	1.000223
10000.0	689.2	-5.6	91.5	895.6	637.9	266.3	27.9	1.000219
10500.0	676.0	-7.1	94.7	883.5	636.0	270.2	29.2	1.000215
11000.0	662.9	-8.6	97.9	871.5	634.2	273.8	30.5	1.000211
11500.0	650.1	-9.9	98.1	855.3	633.9	277.5	33.6	1.000207
12000.0	637.4	-10.7	94.4	844.8	631.6	280.6	37.0	1.000198
12500.0	624.8	-11.8	95.3	831.7	630.2	282.0	40.2	1.000194
13000.0	612.5	-12.8	96.7	818.6	629.0	282.5	43.4	1.000195
13500.0	600.4	-13.9	98.1	805.7	627.7	282.8	45.7	1.000191
14000.0	588.6	-14.5	98.5	791.7	626.9	282.7	46.9	1.000187
14500.0	576.8	-15.2	97.5	777.9	626.1	282.6	47.6	1.000184
15000.0	565.3	-16.1	96.6	765.4	624.9	282.2	46.3	1.000180
15500.0	554.0	-17.1	95.8	753.0	623.7	281.8	45.0	1.000177
16000.0	542.9	-18.1	95.0	740.9	622.5	280.3	44.5	1.000173
16500.0	531.9	-19.8	91.1	730.7	620.4	278.6	44.1	1.000170
17000.0	521.1	-21.2	87.7	719.9	618.6			1.000166
17500.0	510.4	-22.6	84.4	709.2	616.9			1.000163
18000.0	500.0	-24.0	81.0	698.7	615.1			1.000160

STATION ALTITUDE 4051.37 FFFT MSL
 8 MAR. 83 1413 HRS MST
 ASCENSION NO. 32

MANDATORY LEVELS
 0630180032
 LC-37
 TABLE 14

GEODETTIC COORDINATES
 32.40175 LAT NFG
 106.31232 LON NFG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4432.	9.8	-1.9	44.	172.5	7.0	
800.0	6073.	5.6	-2.7	55.	240.7	14.1	
750.0	7790.	.7	-4.1	70.	255.2	27.1	
700.0	9592.	-4.4	-5.9	89.	263.4	27.6	
650.0	11491.	-8.9	-9.1	98.	277.5	33.6	
600.0	13505.	-13.9	-14.1	98.	282.8	45.7	
550.0	15662.	-17.5	-18.0	94.	281.3	44.8	
500.0	17976.	-24.0	-26.3	81.			

STATION ALTITUDE 3489.00 FEET MSL
 4 MAR. 43 1537 HRS. MST
 ASCENSION NO. 121

SIGNIFICANT LEVEL DATA
 0630020121
 WHITE SANDS
 TABLE 15

GEODETIC COORDINATES
 32.400049 LAT NFG
 106.370331 LONG WFG

PRESSURE (POMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
862.8 3489.0	14.2 3.7	49.0
850.0 4400.9	10.8 -0.3	46.0
761.7 7359.2	2.2 -3.1	68.0
733.1 8369.7	-1.0 -2.9	87.0
700.0 9579.3	-2.3 -9.4	58.0
657.8 11189.3	-6.7 -13.6	58.0
567.4 14053.3	-14.5 -18.2	73.0
553.6 15520.3	-18.0 -23.1	64.0
520.3 17033.9	-21.9 -22.8	92.0
500.0 17994.4	-23.5 -27.0	73.0

STATION ALTITUDE 3989.00 FEET MSL
 4 MAR. 83 1537 HRS MST
 ASCENSION NO. 121

UPPER AIR DATA
 0630020121
 WHITE SAMUS

GEODETIC COORDINATES
 32.40043 LAT NFG
 106.37033 LONG NFG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INFLX OR REFRACTION
							DIRECTION (DEGREES TRUE)	SPEED KNOTS	
3989.0	862.8	14.2	3.7	49.0	1042.4	661.4	265.0	20.0	1.000269
4000.0	862.5	14.1	3.5	48.9	1042.3	661.4	265.0	20.0	1.000268
4500.0	840.9	10.5	-4	46.7	1037.3	657.0	265.2	21.3	1.000259
5000.0	831.3	9.1	-7	50.5	1023.5	655.3	265.4	22.6	1.000256
5500.0	816.1	7.6	-10	54.2	1009.9	653.6	265.6	23.8	1.000252
6000.0	801.1	6.2	-15	57.9	996.6	651.9	265.8	25.1	1.000249
6500.0	786.4	4.7	-20	61.6	983.4	650.2	265.9	26.3	1.000245
7000.0	771.9	3.2	-26	65.3	970.5	648.5	267.2	27.6	1.000241
7500.0	757.6	1.8	-30	70.6	957.8	646.7	271.3	28.8	1.000238
8000.0	743.4	.2	-29	80.0	945.2	644.9	275.0	30.2	1.000236
8500.0	729.5	-1.1	-35	83.9	931.9	643.3	278.3	31.7	1.000232
9000.0	715.7	-1.7	-6.1	71.9	916.5	642.5	281.2	31.4	1.000224
9500.0	702.1	-2.2	-8.9	59.9	901.3	641.8	284.1	31.3	1.000217
10000.0	688.7	-3.4	-10.5	58.0	888.3	640.3	287.1	31.2	1.000212
10500.0	675.5	-4.8	-11.8	58.0	875.8	638.6	289.2	30.8	1.000208
11000.0	662.6	-6.2	-13.1	58.0	863.6	636.9	290.7	30.1	1.000204
11500.0	649.0	-7.5	-14.0	59.6	851.2	635.3	292.2	29.3	1.000201
12000.0	637.1	-8.9	-14.8	62.2	838.9	633.6	293.4	28.9	1.000197
12500.0	624.6	-10.3	-15.6	64.9	826.8	632.0	292.6	30.1	1.000194
13000.0	612.4	-11.6	-16.4	67.5	814.9	630.3	291.9	31.3	1.000191
13500.0	600.4	-13.0	-17.3	70.1	803.2	628.7	291.3	32.5	1.000188
14000.0	588.6	-14.4	-18.2	72.7	791.6	627.0	289.4	34.0	1.000185
14500.0	576.9	-15.6	-19.7	70.3	779.6	625.5	287.3	35.6	1.000181
15000.0	565.4	-16.8	-21.4	67.2	767.6	624.0	285.4	37.3	1.000177
15500.0	554.1	-18.0	-23.0	64.1	755.8	622.4			1.000174
16000.0	542.8	-19.2	-22.8	72.9	744.2	621.0			1.000171
16500.0	531.8	-20.5	-22.8	82.1	732.8	619.4			1.000169
17000.0	521.0	-21.8	-22.8	91.4	721.7	617.8			1.000167
17500.0	510.3	-22.7	-24.8	82.8	709.4	616.7			1.000163

STATION ALTITUDE 3089.00 FEET MSL
 4 MAR. 83
 ASCENSION NO. 121

MANDATORY LEVELS
 0630020121
 WHITE SANDS

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		WFL HUM.		WIND DATA	
MILLIBARS	FLEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4398.	10.8	-0.3	46.		265.2	21.0
800.0	6043.	6.0	-1.5	58.		265.8	25.2
750.0	7763.	.9	-2.9	74.		273.3	29.5
700.0	9570.	-2.3	-9.4	58.		284.6	31.3
650.0	11483.	-7.5	-14.0	60.		292.2	29.4
600.0	13507.	-13.0	-17.3	70.		291.3	32.5
550.0	15661.	-18.4	-23.0	67.			
500.0	17970.	-23.5	-27.0	73.			

GEODETIC COORDINATES
 12.40043 LAT DEG
 106.37033 LON DEG